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Polyethylene Bags for Tree Seed Shipment and Stratification

by

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Polyethylene bags, of the type used for storing frozen foods, are extremely useful for shipment of tree seed, particularly of species which cannot stand drying out. They are becoming widely used for handling seed of a variety of species.

Of the many types of plastic film, polyethylene is unique in allowing considerable oxygen and carbon dioxide penetration while also being waterproof. Therefore it will keep tree seeds from drying out while at the same time permitting respiration. It has the additional advantages of being light, tough, and flexible even at low temperatures.

Polyethylene bags of different sizes have been used extensively at the Ohio Agricultural Experiment Station during the past two years for the shipment and storage of sugar maple seed for genetics experiments. Bags have been sent to cooperating persons and agencies all over eastern North America. The plastic bags are taken out in the field for individual collections, and fastened with a rubber band or "Twist-em". A numbered thin aluminum tag is enclosed in the bag to identify the lot. The bags are shipped enclosed in a cloth bag or cardboard carton.

Maple seed collected and shipped in this manner has nearly always been received in excellent condition. In contrast, seed shipped from distant points in ordinary cloth bags has generally been very dry, with an extremely low germinative capacity. In a few cases surface mold has developed on the seed in the polyethylene bags during long-distance shipment. This did not appear to affect the viability of the seed, however, providing it was stored properly after arrival.

The bags have also been found useful for shipping seed of other species, such as oaks and chestnuts.

The seed may also be stratified in the same bags. Sugar maple seed for winter greenhouse planting is stored in the bags until it begins to sprout, as sugar maple will do in stratification. Mixture of milled sphagnum moss with the seed eliminates problems of heating and molding during stratification. Since the bag is transparent, the condition of the seed and the writing on the aluminum tag can be observed at any time without opening it. Bags are stored on shelves or floor in a cold storage room or refrigerator.

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